

**REMARKS/ARGUMENTS**

Claims 1 – 14 and 16 – 21 are currently pending in the application. Claim 3 is amended by the present Amendment solely to correct a typographical error. No new matter is added.

The present Amendment and Remarks are in response to the non-final Office Action mailed on May 11, 2009, which the USPTO substituted to replace the non-final Office Action that was mailed on February 25, 2009. The response period was restarted to begin on May 11, 2009, as reflected in PAIR.

Claims 1 – 14 and 20 – 21 are provisionally rejected for nonstatutory obviousness-type double patenting over co-pending U.S. Patent Application No. 10/589,013. Claims 16 – 19 are provisionally rejected for nonstatutory obviousness-type double patenting over co-pending U.S. Patent Application No. 10/589,156.

A terminal disclaimer to co-pending U.S. Patent Application No. 10/589,013 and to co-pending U.S. Patent Application No. 10/589,156 is filed herewith.

Accordingly, Applicants request reconsideration and withdrawal of the provisional double patenting rejections to claims 1 – 14 and 16 – 21 over U.S. Patent Application No. 10/589,013 and U.S. Patent Application No. 10/589,156.

Claims 1 – 14 and 16 – 21 are rejected under 35 U.S.C. §102(e), or in the alternative, rejected under 35 U.S.C. §103(a), over U.S. Patent No. 7,300,514 to Bonafous, et al. (hereinafter, “Bonafous”).

Independent claim 1 recites a dry premix comprising a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators and aggregates. The aggregates are made

up of two fractions having different grain size, and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2.

Bonafous discloses mortar and concrete mixtures having  $\text{TiO}_2$  granules as a photocatalyst that give the mixtures the ability to degrade pollutants (col. 3, lines 45 – 52) and a “self-cleaning” property that degrades substances that are deposited on the surface of the concrete or mortar (col. 3, lines 53 – 55; col. 4, lines 8 – 29). Bonafous discloses that, in the prior art, the proportion of photocatalytic particles that could be placed in the concrete or mortar mixture was limited, as too much would interfere with the binder and cause finer-sized grains of the photocatalyst to detach from the material (col. 1, lines 50 – 60). To address the problem, Bonafous discloses that he could achieve an increase in photocatalytic activity in mortar or concrete mixtures by using a mixture of photocatalytic particles from several different granulometric classes (number of classes  $\geq 2$ ) having a particle size between  $0.010\ \mu\text{m}$  to  $0.500\ \mu\text{m}$  in the mixture (col. 2, lines 3 – 17, 34 – 37; and col. 12, lines 44 – 54).

However, the  $\text{TiO}_2$  photocatalytic particles in Bonafous are not the same as the aggregates recited in claim 1, as inferred in the Office Action. Claim 1, for example, recites aggregates that are made up of two fractions with different grain sizes, and that have a ratio between 2.2 and 3.2 of characteristic grain diameters of the two fractions of aggregates. By contrast, all particle size issues in Bonafous are in relation to  $\text{TiO}_2$  as a photocatalyst, and not to aggregates.

Aggregates are inert materials. The present application discloses: “*From the mineralogical standpoint, the aggregates are those commonly used in the preparation of concretes (e.g., sand) and are classified in the standard UNI 8520.*” (page 4, lines 33 – 34, to page 5, line 1). Bonafous does disclose compositions that include aggregates such as sand, such as in Table 12 (“*c/s is the weight ratio of cement to sand*”), but neither the particle size nor other physical parameters thereof is ever discussed in Bonafous.

Therefore, it is evident that – even for Bonafous – sand, representing aggregates, is clearly distinguished from  $\text{TiO}_2$  as a photocatalyst.

In addition, claim 1 of Bonafous recites:

“...a photocatalytic mixture of photocatalytic titanium oxide particles of  $n$  granulometric classes having different specific surface areas,  $n$  being a number greater than or equal to 2, and of particle size comprised between about 0.010  $\mu\text{m}$  and 0.500  $\mu\text{m}$ ...”

Bonafous is in fact focused on the photocatalytic activity of  $\text{TiO}_2$  (see, for example, col. 2, lines 26 – 28, where “...*the catalytic effect is particularly improved when the mixture is constituted by two different granular classes...*”), and never on the fluidity of the compositions like the present application. There is a clear distinction between fluidity based on aggregates on the one hand and photocatalytic activity based on  $\text{TiO}_2$  on the other.

For all of the above reasons, Bonafous fails to disclose, or even suggest, the elements in claim 1. Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections over Bonafous to claim 1.

Independent claim 8 recites a pourable cementitious mortar having a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators, aggregates, and water. The aggregates are made up of two fractions with different grain size, and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2.

As described above, Bonafous discloses mortar or concrete mixtures containing mixtures of photocatalytic granules to increase photocatalytic activity. However, for the same reasons as provided above, the photocatalytic particles in Bonafous are clearly distinguished from the aggregates recited in claim 8, which are made up of two fractions with different grain sizes, and that have a ratio between 2.2 and 3.2 of characteristic grain diameters of the two fractions of aggregates. By contrast, Bonafous discloses particle sizes

only in relation to photocatalysts, but not to aggregates. As discussed above, aggregates are inert materials. Bonafous discloses some mixtures that include aggregates, such as sand (see, e.g., Table 12), but Bonafous does not disclose particle size or other physical parameters of aggregates. Therefore, Bonafous fails to disclose or suggest claim 8.

For the above reasons, Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections over Bonafous to claim 8.

Independent claim 16 recites a method of using a pourable cementitious mortar having a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators, aggregates, and water. The aggregates are made up of two fractions with different grain size and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2, for applications in the cement sector.

Bonafous is described above. However, Bonafous fails to disclose or suggest a method for using a pourable cementitious mortar having, *inter alia*, aggregates made up of two fractions with different grain size and the ratio between the characteristic grain diameters of the two fractions of aggregates between 2.2 and 3.2, for analogous reasons to those provided above, and so does not anticipate or render obvious the method in claim 16.

Therefore, Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections over Bonafous to claim 16.

Independent claim 18 recites a process for preparing a pourable mortar with a high degree of fluidity, by mixing water, a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators, aggregates, and possible cementitious additives. The aggregates are made up of two fractions with different grain size, and the ratio between the characteristic grain diameters of the two fractions is comprised between 2.2 and 3.2.

Bonafous, described above, does not disclose or suggest a process for preparing a pourable mortar with a high degree of fluidity having, *inter alia*, aggregates made up of two fractions with different grain size and the ratio between the characteristic grain diameters of the two fractions is comprised between 2.2 and 3.2. For at least these reasons, Bonafous thereby fails to anticipate or render obvious the process recited in claim 18.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections to claim 18 over Bonafous.

Independent claim 19 recites a process for preparing cementitious products comprising pouring cementitious mortar comprising a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators, aggregates, and water. The aggregates are made up of two fractions with different grain size and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2 into appropriate molds, and solidified therein.

Bonafous is described above. However, Bonafous fails to disclose or suggest a process for preparing cementitious products by, *inter alia*, pouring cementitious mortar having aggregates that are made up of two fractions with different grain size and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2 into appropriate molds. Bonafous thereby fails to anticipate or render obvious the process in claim 19.

Thus, Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections over Bonafous to claim 19.

Independent claim 21 recites a cementitious product comprising a dry premix comprising a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators and aggregates. The aggregates are made up of two fractions having different

grain size and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2.

Bonafous is discussed above. However, for those same reasons, Bonafous fails to disclose or suggest a dry premix having a fast-setting hydraulic binder, fluidifiers and/or superfluidifiers, setting regulators and aggregates, where the aggregates are made up of two fractions having different grain size and the ratio between the characteristic grain diameters of the two fractions of aggregates is comprised between 2.2 and 3.2. Bonafous thus fails to anticipate or render obvious claim 21.

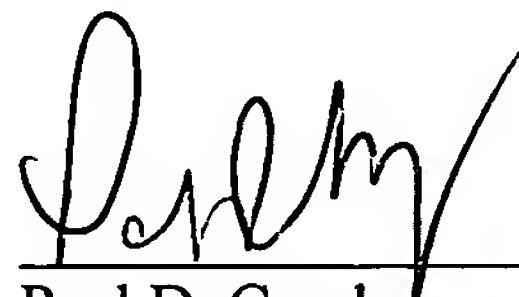
Therefore, Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections to claim 21 over Bonafous.

Accordingly, for all of the reasons provided above, Applicants respectfully request reconsideration and withdrawal of the §102(e) and §103(a) rejections over Bonafous to claims 1 – 14 and 16 – 21.

Applicants submit that the pending claims are allowable over the cited art, and respectfully request issuance of a Notice of Allowability for claims 1 – 14 and 16 – 21.

Respectfully submitted,

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Date

  
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Paul D. Greeley  
Registration No. 31,019  
Attorney for Applicants  
Ohlandt, Greeley, Ruggiero & Perle, LLP  
One Landmark Square, 10<sup>th</sup> Floor  
Stamford, CT 06901-2682  
Tel: (203) 327-4500  
Fax: (203) 327-6401